

Molex 75542-5000 PDF

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RECEPTACLE ASSEMBLY
POWER AND SIGNAL MODULE

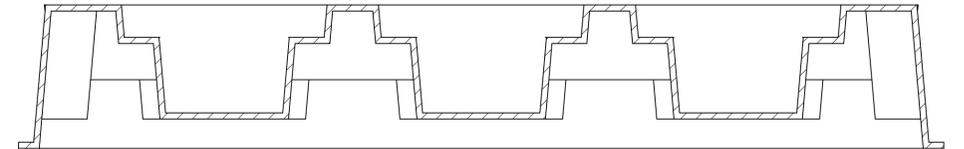
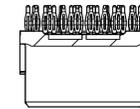
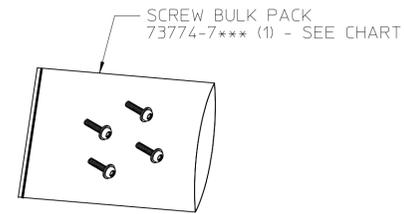
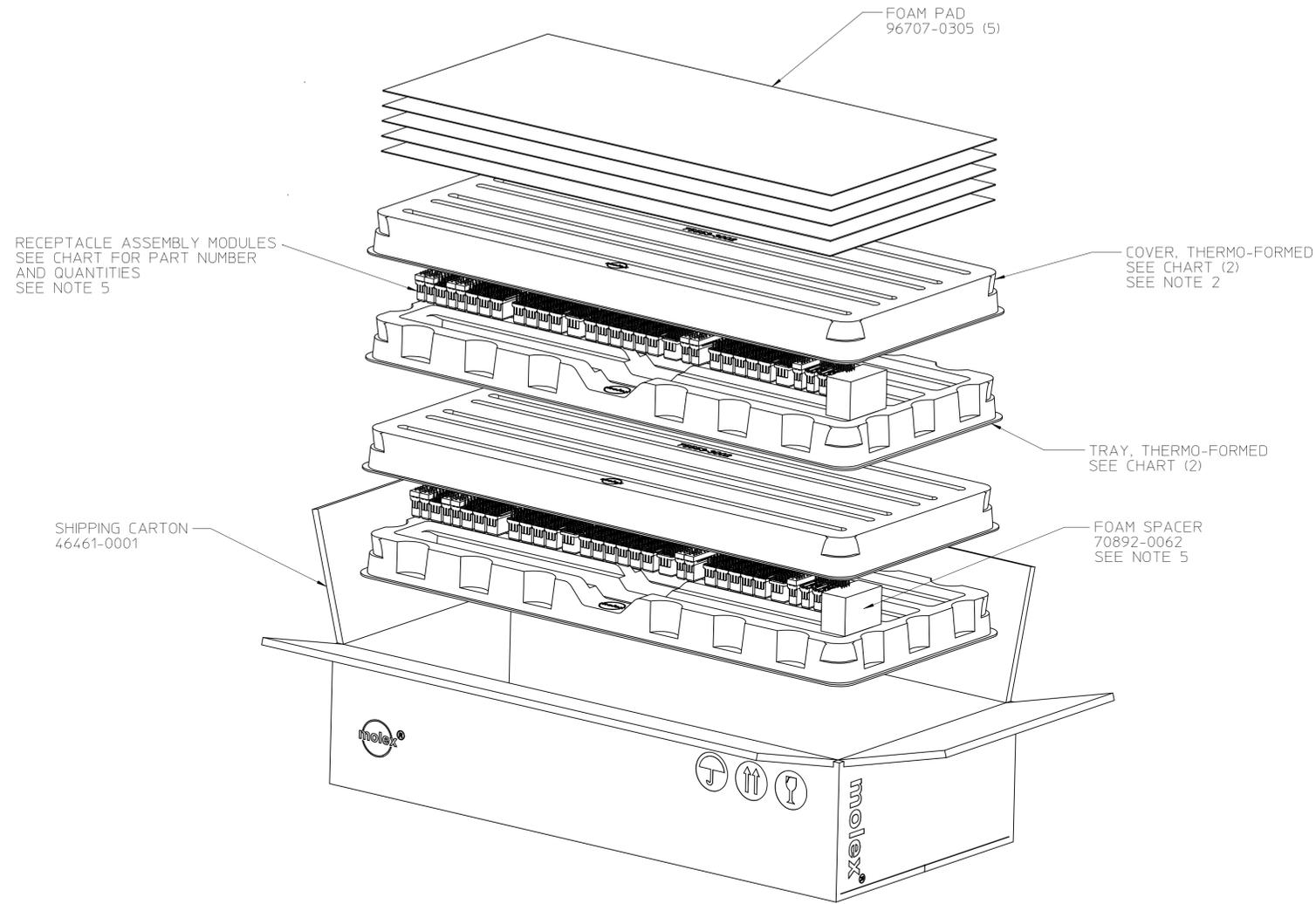
NOTES:

- PARTS TO BE ORIENTATED INTO TRAY AS SHOWN
- PROPER ORIENTATION OF COVER ONTO TRAY IS FOR THE LETTERING ON THE SURFACE OF EACH TO BE IN NORMAL READING ORIENTATION
- CARTON CONTAINS 2 TRAYS - SEE CHART FOR TRAY QUANTITIES
- PACKAGING MUST MEET MOLEX ENGINEERING STANDARD ES-40000-7001
- FOAM SPACERS (70892-0062) REQUIRED TO FILL OPEN AREAS AT THE ENDS OF TRAY CHANNELS. NO FOAM REQUIRED FOR 75542 SERIES PARTS.

ASSEMBLY PART NUMBER	DESCRIPTION	TRAY PART NUMBER	COVER PART NUMBER	QUANTITY PER ROW	QUANTITY PER TRAY	QUANTITY PER BOX	SCREW PACK
46079-1000	4 CIRCUIT MULTI-PATH	75553-3003	75553-3002	25	75	150	N/A
46079-1001	4 CIRCUIT MULTI-PATH	75553-3003	75553-3002	25	75	150	N/A
75542-1000	150 AMP POWER	75553-3004	75553-3002	30	90	180	N/A
75542-1001	150 AMP POWER	75553-3004	75553-3002	30	90	180	N/A
75542-5000	150 AMP POWER	75553-3004	75553-3002	30	90	180	N/A
75542-5001	150 AMP POWER	75553-3004	75553-3002	30	90	180	N/A
75545-1000	80 AMP POWER	75553-3003	75553-3002	45	135	270	N/A
75545-1001	80 AMP POWER	75553-3003	75553-3002	45	135	270	N/A
75545-1100	40 AMP POWER	75553-3003	75553-3002	45	135	270	N/A
75545-1101	40 AMP POWER	75553-3003	75553-3002	45	135	270	N/A
75545-5000	80 AMP POWER	75553-3003	75553-3002	45	135	270	N/A
75545-5001	80 AMP POWER	75553-3003	75553-3002	45	135	270	N/A
75545-5004	80 AMP POWER	75553-3003	75553-3002	45	135	270	N/A
75545-5100	40 AMP POWER	75553-3003	75553-3002	45	135	270	N/A
75545-5101	40 AMP POWER	75553-3003	75553-3002	45	135	270	N/A
75548-6000	64 CIRCUIT SIGNAL	75553-3003	75553-3002	15	45	90	N/A
75548-6100	64 CIRCUIT SIGNAL	75553-3003	75553-3002	15	45	90	N/A
75548-6056	56 CIRCUIT SIGNAL	75553-3003	75553-3002	17	51	102	N/A
75548-6156	56 CIRCUIT SIGNAL	75553-3003	75553-3002	17	51	102	N/A
75548-6048	48 CIRCUIT SIGNAL	75553-3003	75553-3002	19	57	114	N/A
75548-6148	48 CIRCUIT SIGNAL	75553-3003	75553-3002	19	57	114	N/A
75548-6040	40 CIRCUIT SIGNAL	75553-3003	75553-3002	22	66	132	N/A
75548-6140	40 CIRCUIT SIGNAL	75553-3003	75553-3002	22	66	132	N/A
75548-6032	32 CIRCUIT SIGNAL	75553-3003	75553-3002	26	78	156	N/A
75548-6132	32 CIRCUIT SIGNAL	75553-3003	75553-3002	26	78	156	N/A
75548-6024	24 CIRCUIT SIGNAL	75553-3003	75553-3002	32	96	192	N/A
75548-6124	24 CIRCUIT SIGNAL	75553-3003	75553-3002	32	96	192	N/A
75552-5001	ALIGNER MODULE	75553-3003	75553-3002	30	90	180	73774-7030
75552-5002	ALIGNER MODULE	75553-3003	75553-3002	30	90	180	73774-7031

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ADD COLUMNS TO CHART EC NO: UCP2017-0581 DRWN: BANDURA 2016/09/09 CHKD: BANDURA 2016/09/09 APPR: BPI SZCZOR 2016/10/21	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE MM/IN	SCALE 1:2	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION
	$\nabla = 0$	4 PLACES ± --- ± ---	mm INCH	DRAWN BY BANDURA	DATE 2007/2/08	TITLE PACKAGING KIT FOR POWER DOCK SR RECEPTACLE MODULES
	$\nabla = 0$	3 PLACES ± --- ± .005		CHECKED BY MDATA	DATE 2007/2/08	
	$\nabla = 0$	2 PLACES ± 0.13 ± .010		APPROVED BY APATEL	DATE	
		1 PLACE ± 0.25 ± ---				
		ANGULAR ± 1/2°				
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE CHART		
			MATERIAL NO.	DOCUMENT NO.		SHEET NO.
			SIZE D	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		1 OF 2



PARTS TO BE ORIENTED IN TRAY AS SHOWN

SEE SHEET 1 EC NO: UCP2017-0581 DRWN: BANDURA 2016/09/09 CHKD: BANDURA 2016/09/09 APPR: BPI SZCZOR 2016/10/21	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
	▽=0	4 PLACES ± --- ± ---	MM/IN	1:1	METRIC	TITLE PACKAGING KIT FOR POWER DOCK SR RECEPTACLE MODULES molex DOCUMENT NO. PK-75541-200 SHEET NO. 2 OF 2
	▽=0	3 PLACES ± --- ± .005	mm INCH			
	▽=0	2 PLACES ± 0.13 ± .010				
▽=0	1 PLACE ± 0.25 ± ---					
		0 PLACE ± ±				
		ANGULAR ±1/2°				
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SEE CHART			
			SIZE D	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		

APPLICATION SPECIFICATION

EXTREME POWERMASS VERTICAL RECEPTACLE INSTALLATION SPECIFICATION

1.0 SCOPE

This specification applies to the series 75541 Extreme Powermass vertical receptacle products with press-fit tails.

2.0 PRODUCT DESCRIPTION

The Extreme Powermass system consists of 150 amp, 80 amp, High Voltage 40 amp, and Signal modular configurations. The vertical receptacle connectors are through-hole devices with eye-of-the-needle compliant pin terminals. The connector assembly is delivered with the modules pre-installed on an alignment "rail" system that aligns and support the modules during the press-fit operation. The rail provides a flat top surface to press with flat rock press during installation so that no specialized tooling is needed. The rail and an accompanying plate must be removed after installation and before connector mating.

3.0 REFERENCE DOCUMENTS

- 3.1 Refer to the appropriate sales or manufacturing drawing for information on dimensions, materials, plating, and markings.
- 3.2 PS-75431-999 - Extreme Powermass Product Specification.
- 3.3 ATS-622022200 - Extreme Powermass Rail Removal Tool Instruction Sheet

<u>REVISION:</u> C3	<u>ECR/ECN INFORMATION:</u> EC No: UCP2012-2313 DATE: 2012/01/24	<u>TITLE:</u> APPLICATION SPECIFICATION FOR EXTREME POWERMASS VERTICAL RECEPTACLE	<u>SHEET No.</u> 1 of 9
<u>DOCUMENT NUMBER:</u> AS-75541-100	<u>CREATED / REVISED BY:</u> J.Quiles	<u>CHECKED BY:</u> M.Bandura	<u>APPROVED BY:</u> A. Patel

APPLICATION SPECIFICATION

4.0 POWERMASS VERTICAL RECEPTACLE NOMENCLATURE AND FEATURES

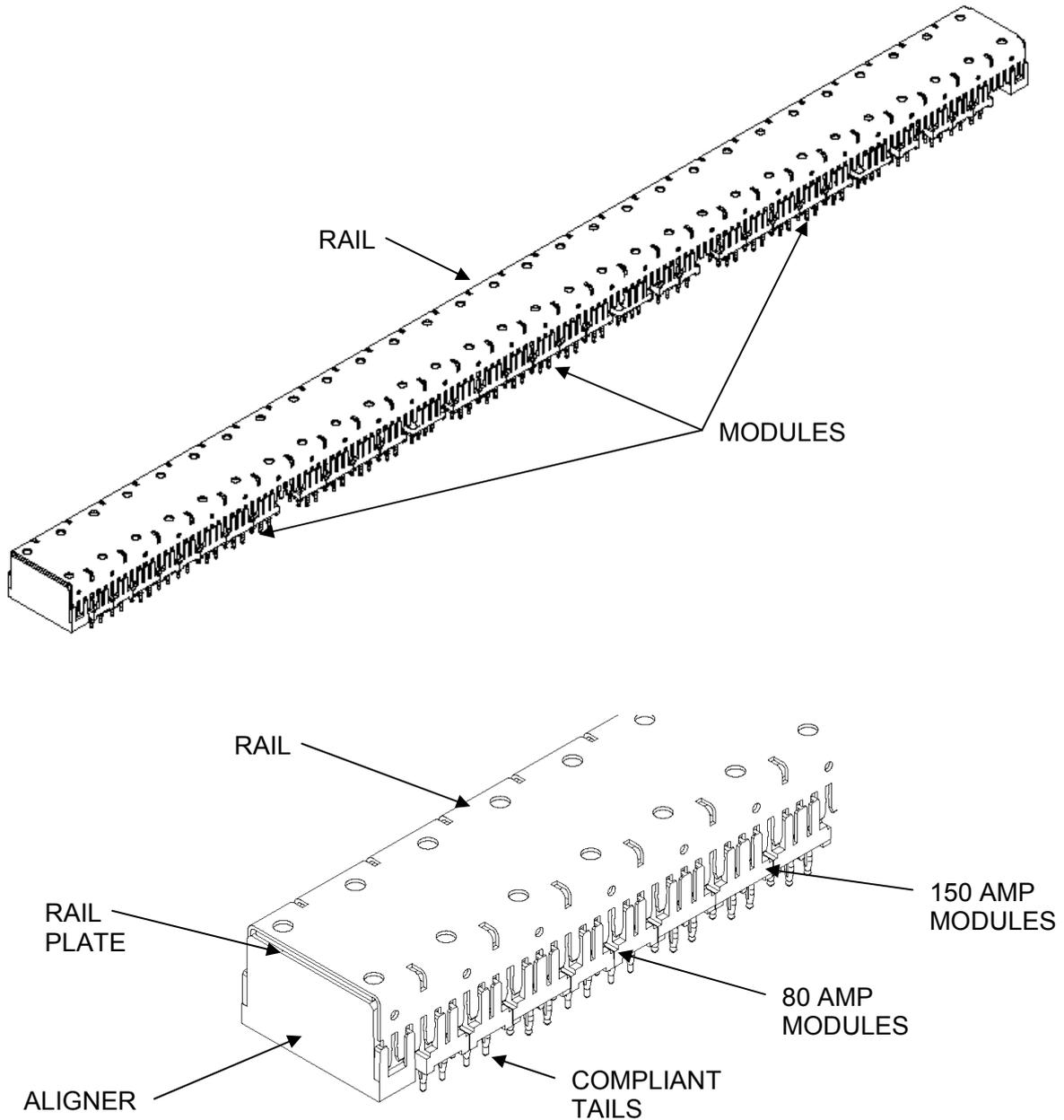


Figure 4.1
AS-DELIVERED CONNECTOR ASSEMBLY

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APPLICATION SPECIFICATION

5.0 PRINTED CIRCUIT BOARD SUPPORT

The Powermass connector requires up to 25 lb. per pin of force to press the connectors into the printed circuit boards. Therefore, a backup or support fixture is required to prevent damage to the PCB. The support fixture should have clearance for the connector terminals when they protrude through the underside of the PCB. It is also recommended that the support fixture have locating pins. Due to the custom nature of each application, Molex does not supply support and locating fixtures, the customer normally supplies them.

The following is one simple way of making a PCB support and locating fixture:

- 5.1 Locate a suitable piece of material for the backup. It should be approximately 3/4 inch thick and the same size or slightly larger than the PCB to be used. While aluminum can be used, a rigid nonconductive material such as a phenolic is preferred. (A stack of scrap PCBs of suitable size can be fastened together and used as a fixture).
- 5.2 Obtain a scrap PCB like the ones to be assembled. Attach this PCB to the material from step 5.1.
- 5.3 Using an oversize drill bit, drill through each hole where a pin from the connector will go. Drill deep enough into the lower material to be certain the pins do not bottom out when inserted (at least 5mm [0.20in] deep).
- 5.4 Locate two (2) holes on the PCB to use as locating points. Drill for and mount suitably sized dowel pins in the two locations on the support fixture.
- 5.5 Clear out the support for any components mounted on the underside of the PCB.

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APPLICATION SPECIFICATION

6.0 INSTALLATION PROCEDURE

- 6.1 Be certain the correct application tooling and board support are clean of debris or any other material that could damage the connector or PCB.
- 6.2 Place the board support under the ram of the press.
Note: Be certain the board support is square and sits level on the press; this is important due to the high forces generated during the press in process. Any flexing during the press in process could damage the board support, PCB, connector or the application tooling. The board support must provide clearance to all press-fit tails.
- 6.3 Program the press (if applicable) for the optimum force necessary to fully seat the connector on the PCB. Consult the Powermass product spec for recommended insertion force.
- 6.4 Place the printed circuit board on the board support.
Note: The PCB should be doweled to the board support so no shifting occurs during the press in process that will cause mis-alignment between the PTH and the clearance holes in the board support.
- 6.5 Before placing the connector on the PCB inspect for any bent pins that would interfere with proper alignment to the PCB. Refer to workmanship criteria for descriptions and examples of product defects.
- 6.6 Place the connector on the PCB.
- 6.7 Place the insertion tool on the connector.
- 6.8 Cycle the press to seat connector on the PCB.
- 6.9 Check that connector is fully seated on the PCB and that all compliant tails were pressed in without any bent pins. See Figure 6.1.

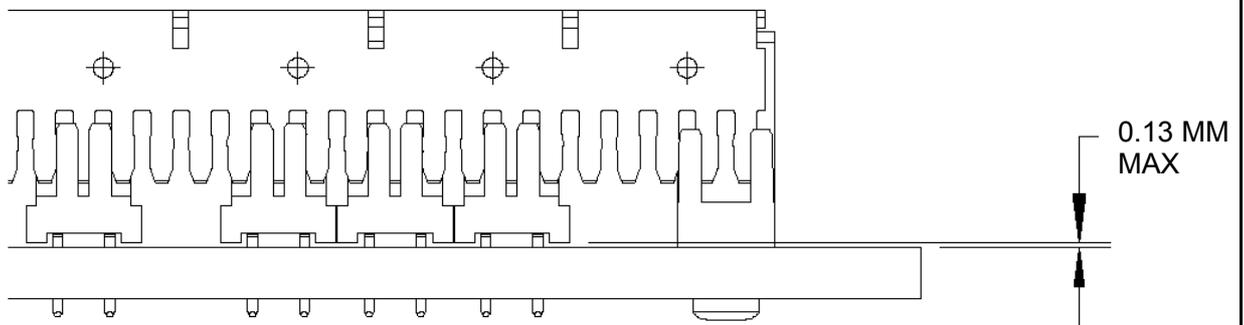


Figure 6.1
CONNECTOR SEATING DIMENSION

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7.0 ALIGNER SCREW INSTALLATION PROCEDURE

After the connector is pressed on the PCB, install 2 screws to each aligner. See Figure 6.1. Torque to 0.20 N-m (1.8 lb-in). The screws should be fully tightened before rail removal to maintain aligner-to-connector module spacing.

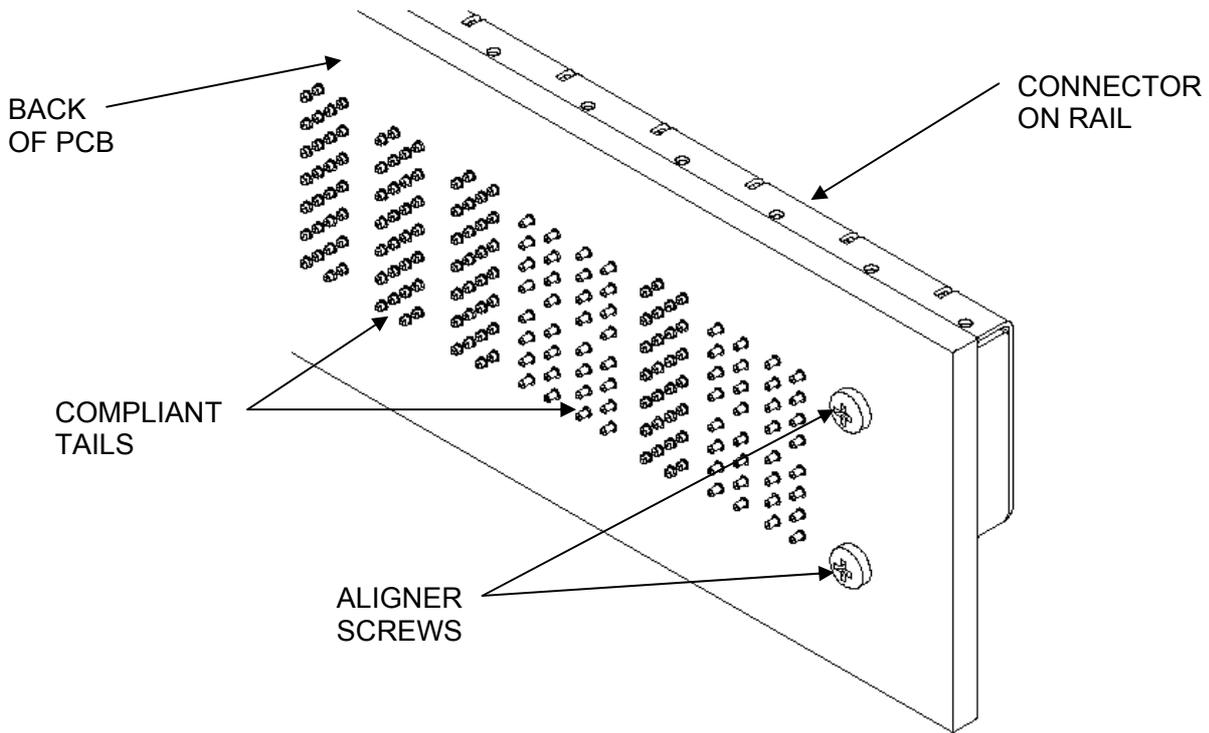


Figure 7.1
ALIGNER ATTACHMENT

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8.0 RAIL REMOVAL PROCEDURE

After the connector is pressed on the PCB and the aligners screws are installed, remove the rail using the Powermass rail removal tool. See Figures 8.1 through 8.3. See Powermass Rail Removal Tool Instruction Sheet for detailed tool operation instructions.

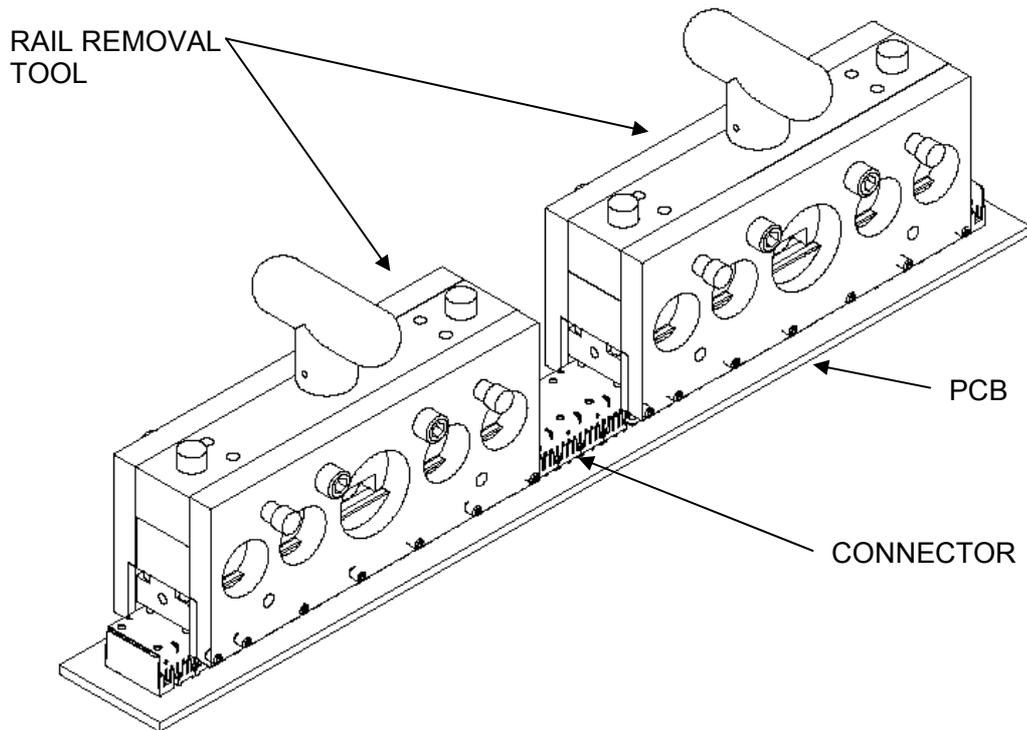


Figure 8.1
RAIL REMOVAL TOOL - INSTALLED

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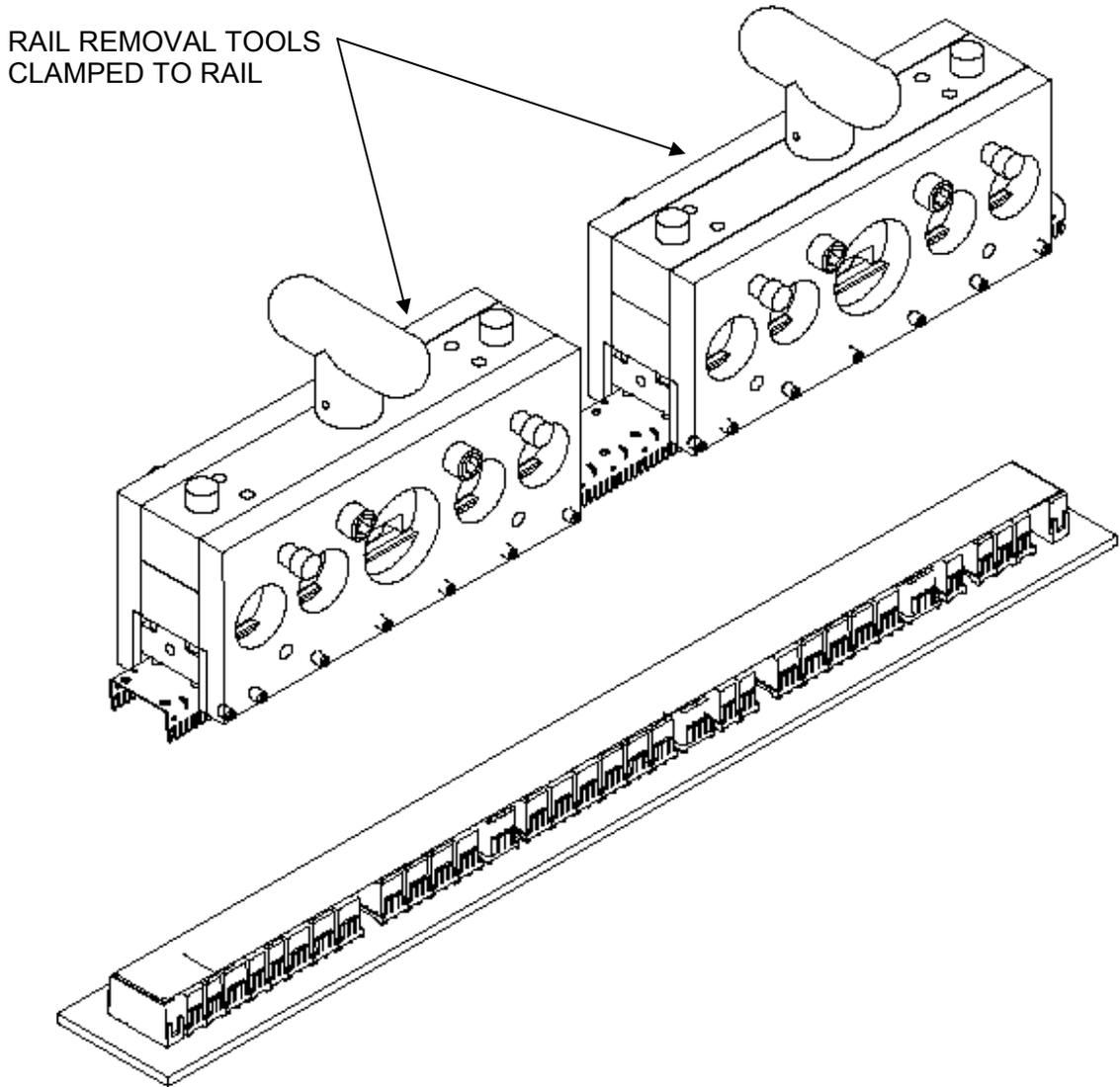


Figure 8.2
RAIL REMOVAL OPERATION
(SHOWN IMMEDIATELY AFTER RAIL REMOVAL)

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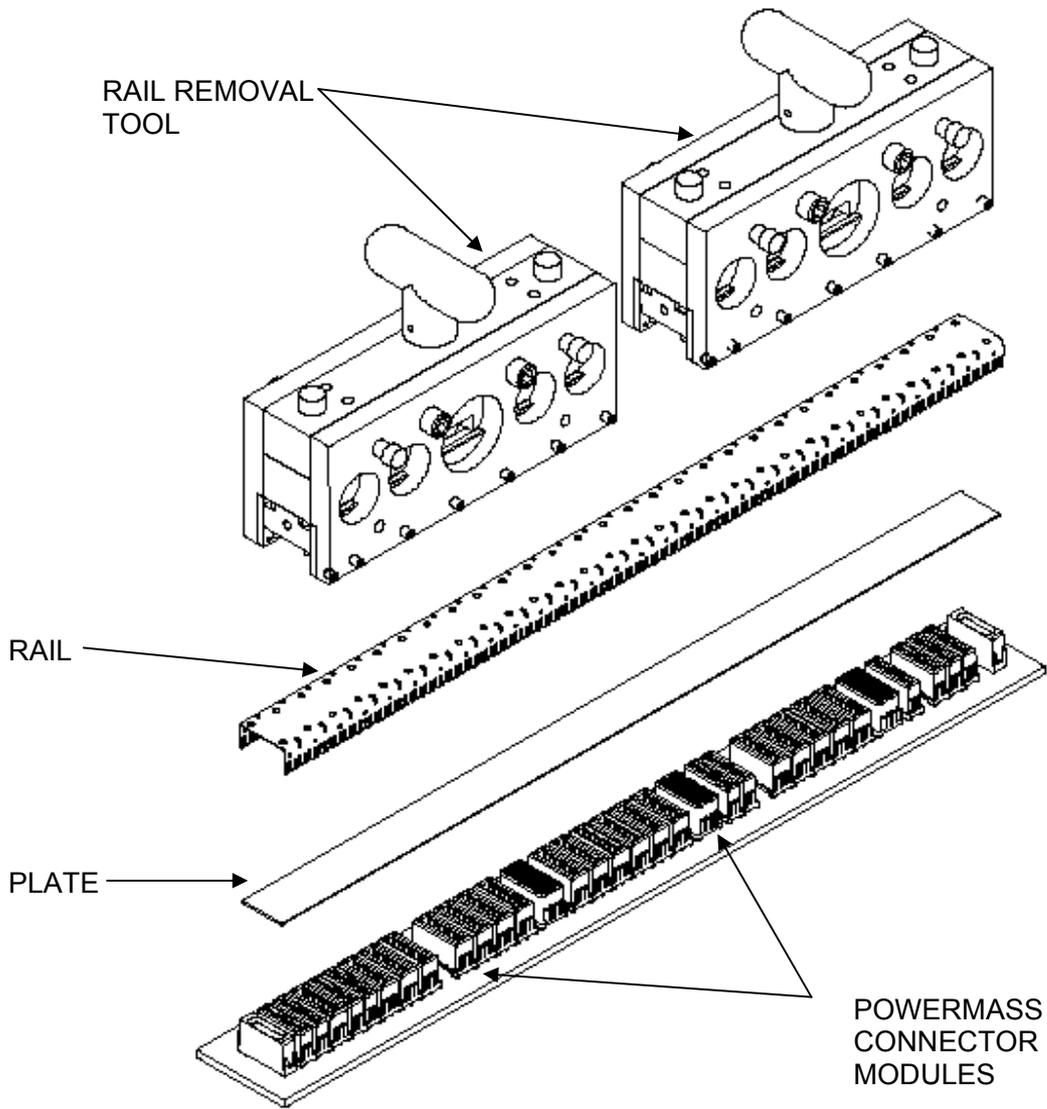


Figure 8.3
CONNECTOR/RAIL REMOVAL TOOL – EXPLODED VIEW

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APPLICATION SPECIFICATION

9.0 INSPECTION PROCEDURE (POST INSTALLATION)

After the connector is pressed on the PCB the final assembly should be inspected. The following is a recommended inspection procedure.

First, inspect the mating side of the connector

- * The plastic shroud should be seated and flush to the PCB, a maximum allowable gap of 0.13mm is acceptable (see figure 8.1).
- * If the seating height is not correct connectors may be repressed to obtain the correct seating height.
- * Inspect the plastic housing, verify it is not cracked, deflected or damaged in any way. To avoid a mis-mate condition the daughtercard lead-in zone must be free of debris and not damaged in any way.

Second, inspect the bottom side of the PCB

- * Verify all pins were pressed into the PTH's, if a pin did not get pressed into a hole the most common cause for this condition is mis-loading of the connector.

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